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Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

mail@szabo-scandic.com

www.szabo-scandic.com

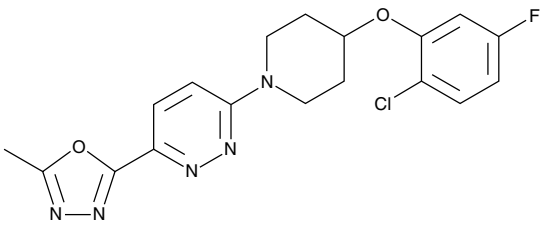
linkedin.com/company/szaboscandic

Product Information

CAY10566

Item No. 10012562

CAS Registry No.: 944808-88-2
Formal Name: 3-[4-(2-chloro-5-fluorophenoxy)-1-piperidinyl]-6-(5-methyl-1,3,4-oxadiazol-2-yl)-pyridazine
MF: $C_{18}H_{17}ClFN_5O_2$
FW: 389.8
Purity: ≥98%
Stability: ≥2 years at -20°C
Supplied as: A crystalline solid



Laboratory Procedures

For long term storage, we suggest that CAY10566 be stored as supplied at -20°C. It should be stable for at least two years.

CAY10566 is supplied as a crystalline solid. A stock solution may be made by dissolving the CAY10566 in an organic solvent purged with an inert gas. CAY10566 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of CAY10566 in ethanol is approximately 0.15 mg/ml and approximately 10 mg/ml in DMSO and DMF.

CAY10566 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, CAY10566 should first be dissolved in DMF and then diluted with the aqueous buffer of choice. CAY10566 has a solubility of approximately 0.15 mg/ml in a 1:5 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Stearoyl-CoA desaturase (SCD) catalyzes the committed step of the conversion of saturated, long-chain fatty acids to monounsaturated fatty acids. The SCD1 gene is thought to play a key role in lipid homeostasis and body weight regulation.[1-3] Thus, modulating SCD1 activity pharmacologically may be a useful tool for regulating type 2 diabetes, dyslipidemia, and obesity. CAY10566 is a potent and selective inhibitor of SCD1 that demonstrates IC_{50} values of 4.5 and 26 nM in mouse and human enzymatic assays, respectively.[4] This compound inhibits the conversion of saturated, long-chain fatty acyl-CoAs to monounsaturated, long-chain fatty acyl-CoAs in HepG2 cells with IC_{50} values of 7.9 and 6.8 nM, respectively, when heptadecanoic acid and palmitic acid are used as the substrate.[4]

References

1. Cohen, P., Miyazaki, M., Socci, N.D., *et al.* Role for stearoyl-CoA desaturase-1 in leptin-mediated weight loss. *Science* **297**, 240-243 (2002).
2. Dobrzyn, P., Sampath, H., Dobrzyn, A., *et al.* Loss of stearoyl-CoA desaturase 1 inhibits fatty acid oxidation and increases glucose utilization in the heart. *Am. J. Physiol. Endocrinol. Metab.* **294**, E357-E364 (2008).
3. Miyazaki, M., Flowers, M.T., Sampath, H., *et al.* Hepatic stearoyl-CoA desaturase-1 deficiency protects mice from carbohydrate-induced adiposity and hepatic steatosis. *Cell Metabolism* **6**, 484-496 (2007).
4. Liu, G., Lynch, J.K., Freeman, J., *et al.* Discovery of potent, selective, orally bioavailable stearoyl-CoA desaturase 1 inhibitors. *J. Med. Chem.* **50**, 3086-3100 (2007).

Cayman Chemical

Mailing address
1180 E. Ellsworth Road
Ann Arbor, MI
48108 USA

Phone
(800) 364-9897
(734) 971-3335

Fax
(734) 971-3640

E-Mail
custserv@caymanchem.com

Web
www.caymanchem.com